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ABSTRACT

This study reports a preliminary investigation into the relationship of different subsets of student attitudes toward economics. A 49-item attitude form was developed with six subscales representing distinct aspects of attitudes toward economics: (1) satisfaction with current grasp of economics; (2) capability for understanding economics; (3) attraction to economics; (4) economics as a field; (5) general need for economics; and (6) economics courses. The questionnaire was administered to three groups of adult students pursuing continuing education programs in financial services and to two groups of undergraduate students. Item scores, subscale scores, full form scores, inter-scale correlations and item scale correlations were calculated. Results indicated good reliability for both the questionnaire and the subscales, but did not reveal strong differences between the subscales. In general, students' attitudes toward economics were quite positive. Differences and similarities between the different student groups followed traditional expectation. The data support further scale development and draw attention to the various facets of student attitudes toward economics. The questionnaire and item results and characteristics are appended. (BS)

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STUDENT ATTITUDES TOWARD ECONOMICS--
DEVELOPMENT OF AN ATTITUDE QUESTIONNAIRE

ED266187

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Acknowledgement: I am greatly indebted to many professors from The American College and from Villanova University, especially Edward Mathis, for their assistance in this project. Professor George Dawson has been extremely helpful in introducing me to related research in economic education. I am also indebted to Michael Roszkowski for technical assistance and criticism.

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Over the years, involvement with professional education in the financial sciences has led me to believe that student attitudes toward academic subjects vary quite substantially. Some areas, such as finance and investments, seem to be well liked, whereas others, such as accounting and economics, tend to be less popular. My interest was particularly aroused by the mixed reactions which students often give to economics.

A good deal of attention has been given in economic education to attitudes toward policy issues or economic attitude sophistication (see the reviews by Siegfried and Fels, 1979 and Dawson, 1980). These however are quite different from attitudes toward economics as a subject, to which the present project was addressed. Research on the latter set of attitudes (Karstensson and Vedder, 1974; Wetzel, Potter, and O'Toole, 1982; Walstad and Soper, 1982, are representative studies) has been aimed at establishing relationships between attitudes toward economics and various other educational factors, such as achievement, further interest in economics, teaching styles, etc. The attitude instruments used in these studies were generally short (10 or 14-item) forms, often rigorously validated (Hodgin and Manahan, 1979; Walstad, 1980), which provided an attitude score reflecting a student's overall attitude toward economics.

The present investigation grew out of a suspicion that student reactions to economics arise from a complex pattern of attitudes with potentially conflicting orientations. In particular, interaction with some of our students led me to believe that many of them can be fascinated with economics as a field, but yet dislike it as a subject of study. An exploratory project was therefore initiated to examine the nature of these reactions and to explore, in a tentative manner, the extent of variability in attitudes toward economics in different groups of students.

An attitude questionnaire structured around different aspects of the study of economics was developed and administered to adult students involved in continuing professional education programs in the financial services field. The questionnaire was also administered to a small number of undergraduate students at a traditional university. This questionnaire appears in Appendix A.

The purpose of this study was thus to obtain a better understanding of how different subsets of attitudes toward economics relate to each other. Such subsets of a more general attitude may prove useful in better delineating cognitive-affective relationships in further economic education research at large.

The preliminary nature of this research and development effort must be emphasized, for it represents but a first approach to this problem. Further efforts by investigators in economic education are needed to refine the issues involved and carry this development further. Given the preliminary nature of this work and the project's particular research constraints, the analysis presented here is restricted to a descriptive statistical framework. No formal model is proposed, nor are significance tests made to generalize the findings. Any potential relationships between the various variables in the study should be taken as merely indicative of future avenues for research. Firm conclusions should await further research of a more formal nature.

Development and Administration of the Attitude Questionnaire

The attitude form was developed by creating a number of statements which were felt to capture feelings and opinions which might be related to a person's attitude to economics as a topic of study. The resulting 49 items were grouped into broad categories which seemed to represent fairly distinct aspects of a person's attitude to economics. The attitude form which emerged is composed of 6 subscales (A to F) which can be scored independently of one another, or which can be considered together as an expression of an overall attitude toward economics.

The initial attitude form was reviewed by a small number of professors of economics, which led to improvements in wording in some of the items. The next step was to administer the form to various groups of students. These groups are listed in Table 1, along with the number of students in each group who completed the form. The attitude form was completed by a total of 227 students, half of whom were in Group 3.

The choice of these groups was not deliberate, but resulted rather from simple opportunity. This situation represents one limiting research constraint inherent in this project and must temper the interpretation of the results, especially as regards their generalizability. Differences between the groups however (see groups 3 and 4 especially) may help in establishing the validity of the form and of its subscales.

Table 1

GROUPS OF STUDENTS TO WHICH THE QUESTIONNAIRE WAS ADMINISTERED

	N
Professional Designation Program	
Group 1 Students taking the Program's introductory economics course	31
Group 2 Students having recently taken the course	21
M.Sc. Program	
Group 3 Students studying toward an M.Sc. in Financial Services	117
College Undergraduate Program	
Group 4 Students without economics course experience	35
Group 5 Students having previously taken an economics course	23

Groups 1, 2, and 3 all consisted of professionals in the financial services who are pursuing continuing education programs. The students in Group 1 were all studying an introductory economics course required as part of a set of courses leading to the CLU (Chartered Life Underwriter) designation. The CLU is an established designation in the field of life insurance. Although the course in question is an introductory one (dealing mostly with macro-economics), most of the students in this group had studied some economics during their undergraduate college days (usually a number of years previously).

The students in Group 2 were similar to those in Group 1, except that they had recently completed the economics course in question and were studying another course in the program.

The students in Group 3 were taking their last two courses in an advanced program leading to a Master of Science in Financial Services degree. One of these two courses was an intensive course on economic issues.

Groups 4 and 5 consisted of undergraduate students attending a suburban university. Many were enrolled in the evening division and were thus adult students who were obtaining a college degree through part-time studies. The students in Group 4 were enrolled in a psychology course, whereas those in Group 5 were enrolled in a commercial finance course.

Results

Three levels of analysis are possible with the student attitudinal responses on the form: (1) individual items can be examined for their own sake; (2) the subscales can be examined individually as distinct sets of attitudes (this is the most interesting level of analysis); and (3) the full form can be examined as representing a composite attitude toward economics.

Item scores

The raw scores obtained on the individual items are presented by group in Appendix B. These scores are within a 1 to 5 range, where 1 is equivalent to "strongly agree" with the item, and 5 is equivalent to "strongly disagree." Thus, the lower the score, the stronger the agreement with the item.

Subscale scores

Going now to the subscale level of analysis, the items within a scale were combined so as to obtain a subscale score along a unified positive-negative dimension of attitude. Half the items on the form (25 items) express a positive reaction, while the other half express a negative reaction. In

creating category scores (an attitude on a given subscale), these negative items were reversed so that a low score on the 1 to 5 range expresses a positive attitude rather than a negative one. The items which were reversed are preceded by a minus sign in the first column of Appendix B. The average item response was then derived for each of the subscales (the mean of all item responses in a subscale) and this represents an overall subscale attitude, where 1 corresponds to a strong positive attitude and 5 to a strong negative attitude. The scores obtained for each subscale are presented, by group, in Table 2.

Full form scores

Likewise, the 6 subscale scores were averaged in turn to derive an overall score for the full form (the third level of analysis). It should be noted that the procedure employed for deriving the full form score is different from simply adding up the 49 item scores and dividing by 49. The procedure employed gives equal weight to each of the 6 subscales in the derivation of the full form score. These mean scores are presented, for each group, in Table 2.

Inter-scale correlations

An analysis was made of the intercorrelations of the different scales and of their correlations with the full form scores. These correlations are presented in Table 3. The highest correlations were between Scales C, D, and F. The analysis also revealed that Scale E did not correlate highly with scales A, B, and F. Scale E also correlated the least with the full form.

Item analysis

No initial attitude questionnaire is ever perfectly sound, hence the need for a technical assessment of the measurement characteristics of its items. Two statistical procedures are often employed to assist in the process of qualifying the items and (oftentimes) of removing suspect items from the questionnaire. The first is factor analysis, which examines the statistical groupings of items into "factors." This is a highly data-driven procedure which often taxes the researcher's ability to meaningfully interpret the resulting factors. The second is a more straightforward procedure in which the correlation of each item's score to the total score (or more

appropriately in this instance, to its scale score) is examined. Items having correlations which are low become suspect items.

Table 2

SUBSCALE SCORES FOLLOWING ITEM REVERSALS[1]

	SCALES						
	A	B	C	D	E	F	Full Form
Group 1	2.8	2.5	2.4	2.6	2.0	2.9	2.6
Group 2	2.5	2.6	2.4	2.6	2.0	2.8	2.5
Group 3	2.2	2.2	2.2	2.3	1.8	2.5	2.2
Group 4	3.2	2.7	2.7	2.7	2.5	2.8	2.8
Group 5	2.5	2.2	2.1	2.4	2.2	2.5	2.3
All students	2.5	2.3	2.3	2.4	2.0	2.6	2.4

1. The lower the score, the more positive the attitude.

An item analysis involving item-scale correlations was performed and the results are presented in the last column of Appendix B. Meir and Gati (1981) have proposed guidelines for interpreting these correlations, among which are the following:

- the correlation of an item to its scale should be high (they suggest .30 or above);
- the correlation of an item to other scales should not be too high (.25 or below) and should certainly be less than the correlation of an item to its own scale.

The items in Appendix B which do not conform to these guidelines have been asterisked in the last column. Any future refinement of the scales should pay particular attention to these items.

Reliability

The internal consistencies of the scales and of the full form can serve as indices of reliability and were therefore examined. The alpha reliability

coefficients obtained were all quite substantial, with Scale E being the lowest. These are presented in Table 4.

Table 3

INTER-SCALE AND FULL FORM CORRELATIONS

	A	B	C	D	E	F	Full Form
Scale A		.54	.42	.44	.39	.47	.70
Scale B			.49	.47	.20	.54	.69
Scale C				.71	.50	.68	.85
Scale D					.48	.74	.86
Scale E						.34	.59
Scale F							.85

Table 4

SCALE AND FULL FORM ALPHA RELIABILITY COEFFICIENTS

Scale A	.82
Scale B	.77
Scale C	.90
Scale D	.80
Scale E	.70
Scale F	.81
Full Form	.94

Discussion

The principal goal of this project was to obtain initial data regarding different aspects of student attitudes toward economics. I will first discuss the questionnaire itself, in light of the data obtained, and then examine the results obtained with the different groups of students with this version of the form.

The questionnaire

The questionnaire itself would seem to be highly reliable, as indexed by a coefficient of internal consistency. This coefficient is .94 for the full form. The coefficients of reliability for the six scales are also respectably high, ranging from .70 to .90. Thus, we can be confident of good reliability even on the level of individual scales.

The main interest of the study was to explore the possibility of establishing patterns or subsets of attitudes which might underlie a more general attitude toward economics. The data do not reveal very strong differences among the scales, which would seem to not support the contention of distinct subsets of attitudes. Indeed, the scale scores in Table 2 are generally quite similar to one another, the maximum range within one group of students being 0.9 (in Group 1). The correlations between the scales are also generally substantial (Table 3), even if the range is from .20 to .74.

Thus, students do not have widely differing attitudes to different aspects of economics. One is struck more by the uniformity of the pattern of attitudes than by their differences.

The differences which do emerge, however, are interesting. Of particular interest is the individuality of Scale E (general need for economics). That is the scale on which students showed the most positive attitude and also the scale which generally correlated the least with other scales. A case could therefore be made for the distinctiveness of this scale and the attitudes which underlie it.

The correlations between the other scales in Table 3 may indicate that we are dealing with undifferentiated attitudes or that the subsets of attitudes are simply related to one another. Scale F for instance (economic courses) is nominally distinct from either Scales C and D (attraction to economics; economics as a field), even if their scores are strongly correlated. The high correlation between Scales C and D themselves, on the other hand, is more easily construed as indicative of a more uniform underlying attitude. Scales C and D could therefore perhaps be merged into a single scale characterizing one's attraction to economics as a field. It would seem useful at this time to continue retaining the individuality of each of the other scales however and to explore in further research their relationships both among themselves and with other educational variables.

On the technical side, certain improvements could be brought to the questionnaire. The item analysis highlighted a number of items which were suspect in this current version of the questionnaire and which might profit from being placed within other scales. In particular, item C1 could be relocated to Scale E, and items F5 and F6 to Scale B. Item D6 could also be relocated to Scale B, but since it replicates item B4, it should probably simply be deleted from the instrument. The validity of these relocations should be closely examined in future empirical research.

Attitudes within different groups

A second purpose of the study was to gauge student attitudes toward economics and see how they might vary among different groups of students. Such results, however, as indicated in the introduction, should be seen as merely indicative of potential relationships between various aspects of attitude and other variables, such as type of student or type of course. No formal model is proposed in this context.

On the whole, students' attitudes towards economics were quite positive, as measured by this particular questionnaire. The group showing the most positive overall attitude was the group of students taking an advanced issues-oriented course in economics (group 3), while the group with the least positive attitude (an attitude which can be characterized as neutral) was the group of students who had never taken an economics course (group 4).

Since these attitude scores only provide a very general picture of the situation, however, it is useful to examine group scores on particular scales to obtain a better understanding of the dynamics of student attitudes in this area.

Groups 3 and 4 show the greatest divergence on Scale A (their satisfaction with their current grasp of economics), and are also the most widely differing groups in their estimated capability for understanding economics (Scale B), their attitude toward economics as a field (Scale D), and their perceived need for economic understanding (Scale E).

Group 5 (consisting of undergraduate business students) leads the rest of the groups in their estimated capability for understanding economics (a ranking shared with group 3) and in their attraction to economics (Scale C). It also shares with group 3 the most positive attitude towards economics courses (Scale F), while group 1 (professional designation students taking a required economics course) had the least positive attitude (considered as neutral).

These differences and similarities between groups are not surprising, for they follow traditional expectations. This in itself lends support to the validity of the questionnaire and of its various scales.

Conclusion

The data collected in this study, in addition to supporting further scale development through item relocation, have essentially highlighted the distinctiveness of the subset of attitudes related to the need for economics (Scale E). They also suggest the possible usefulness (and resulting economy) of merging Scale C and D into a single scale.

The main value of the study however may be a more general one and consist in drawing attention to various facets of student attitudes toward economics. The study of models relating affective factors to cognitive and situational factors in economics education would likely profit from a better delimitation of these affective factors and a greater understanding of their composition.

The preliminary nature of this work needs to be emphasized once again. It is but a first examination of the complex web of student attitudes toward economics. It is our hope that other economics educators will pursue this line of investigation with other groups, either with the attitude scales presented here or with similar forms.

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APPENDIX A

ATTITUDE TOWARD ECONOMICS

Your name: _____

Please take a few minutes to complete this questionnaire. It is part of a research project on student attitudes toward economics. The data is confidential and will only be reported in summary form. Your cooperation is greatly appreciated.

Directions: Circle the response which best describes how you feel in each case. If an item does not apply to you, circle the middle rating (Undecided).

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A. Satisfaction with current grasp of economics					
1. My knowledge of economics is poor.	SA	A	U	D	SD
2. I have enough general knowledge to understand day to day economics.	SA	A	U	D	SD
3. I do not feel at ease with economics.	SA	A	U	D	SD
4. I have trouble following what is happening in the economic news.	SA	A	U	D	SD
5. I feel I should know more about economics.	SA	A	U	D	SD
6. I feel I know enough economics to get by in society.	SA	A	U	D	SD
7. My grasp of economic issues is good.	SA	A	U	D	SD
B. Capability for understanding economics					
1. I could really become proficient at economics if I wanted to.	SA	A	U	D	SD
2. I am afraid I do not do well in economic courses.	SA	A	U	D	SD
3. Economics is too complicated for me.	SA	A	U	D	SD
4. Economic principles are not that hard to understand.	SA	A	U	D	SD
5. I have trouble coping with the math in economics.	SA	A	U	D	SD
6. Studying economics would be easy if only I had the time.	SA	A	U	D	SD
C. Attraction to economics					
1. I feel I should learn more about practical economic problems in this country.	SA	A	U	D	SD
2. I like using economic concepts to analyze situations.	SA	A	U	D	SD
3. I do not enjoy economics.	SA	A	U	D	SD
4. I find economic issues stimulating.	SA	A	U	D	SD
5. I would rather not study economics.	SA	A	U	D	SD
6. I find economics interesting.	SA	A	U	D	SD
7. Economics makes me think.	SA	A	U	D	SD
8. I would like to have more opportunity to learn about economics.	SA	A	U	D	SD
9. I enjoy reading articles about economic topics.	SA	A	U	D	SD
D. Economics as a field					
1. Economics is uninteresting as a scholarly field.	SA	A	U	D	SD
2. Economics is a dry subject.	SA	A	U	D	SD
3. Economics can be very exciting.	SA	A	U	D	SD
4. Economics is overly abstract.	SA	A	U	D	SD

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5. Economics is about concrete problems.	SA	A	U	D	SD
6. Economics is difficult to understand.	SA	A	U	D	SD
7. Economics and politics are closely related.	SA	A	U	D	SD
8. Economics is wishy-washy.	SA	A	U	D	SD
9. Economics is a bore.	SA	A	U	D	SD
10. Economics is too precise.	SA	A	U	D	SD

E. General need for economics

1. Everyone should study some economics.	SA	A	U	D	SD
2. Economics is an important subject in one's education.	SA	A	U	D	SD
3. To understand politics, one needs some economics.	SA	A	U	D	SD
4. Economics will not be very useful to me personally.	SA	A	U	D	SD
5. Economics can help me in my financial affairs.	SA	A	U	D	SD
6. No one should be required to study economics.	SA	A	U	D	SD

F. Economics courses

1. Economics could be very exciting.	SA	A	U	D	SD
2. Economic courses compare favorably with other subject courses.	SA	A	U	D	SD
3. Economics is generally not taught well.	SA	A	U	D	SD
4. Economic courses lack zest.	SA	A	U	D	SD
5. Economic courses are no more difficult than most other courses.	SA	A	U	D	SD
6. Economic courses require more concentration than most other courses.	SA	A	U	D	SD
7. Economic courses are dull.	SA	A	U	D	SD
8. I hate to think of exams in economic courses.	SA	A	U	D	SD
9. Economics is one of my most dreaded subjects.	SA	A	U	D	SD
10. My intellectual curiosity is stimulated by economic courses.	SA	A	U	D	SD
11. Economic courses are worth the time and effort they take.	SA	A	U	D	SD

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APPENDIX B

ITEM RESULTS AND CHARACTERISTICS

Item[2]	Mean Response[1] Group 1[3]	Group 2	Group 3	Group 4	Group 5	Item-Scale Correlation[4]
-A1	3.5	4.0	4.1	2.5	3.8	.7
A2	2.2	1.9	1.8	2.4	1.8	.6
-A3	2.9	3.2	3.8	2.7	3.6	.6
-A4	3.4	3.8	4.0	3.1	3.7	.7
-A5	1.9	2.0	2.3	1.9	1.7	.2*
A6	2.2	2.3	1.9	2.6	2.3	.5
A7	2.7	2.5	2.1	3.3	2.3	.7
B1	2.2	2.4	2.1	2.4	1.9	.5
-B2	3.3	3.6	4.1	3.3	4.0	.7
-B3	3.7	3.8	4.2	3.8	4.0	.6
B4	2.5	2.9	2.4	2.9	2.3	.5
-B5	3.5	3.4	3.8	3.4	3.9	.4
B6	2.6	3.1	2.8	3.3	2.7	.3
C1	1.9	1.9	2.1	2.0	1.9	.3*
C2	2.7	2.5	2.5	3.3	2.5	.6
-C3	3.3	3.5	3.9	3.1	3.7	.8
C4	2.5	2.6	2.1	3.0	2.4	.8
-C5	3.3	3.4	3.8	3.0	4.0	.8
C6	2.3	2.4	2.1	2.6	2.0	.8
C7	1.9	2.1	1.8	2.3	1.8	.5
C8	2.5	2.4	2.3	2.5	2.0	.7
C9	2.6	2.6	2.2	3.0	2.4	.7
-D1	3.4	3.7	3.8	3.2	3.7	.5
-D2	2.9	3.4	3.5	2.9	3.5	.6*
D3	2.5	2.7	2.2	2.9	2.1	.7*
-D4	2.8	3.1	3.5	3.2	3.6	.5
D5	2.6	3.0	2.6	2.5	2.8	.2*
-D6	2.8	3.0	3.3	2.9	3.1	.4*
D7	2.0	2.2	1.9	2.1	2.1	.2*
-D8	3.6	3.8	3.8	3.6	3.4	.4
-D9	3.6	3.6	3.9	3.4	3.7	.7
-D10	3.8	3.7	4.2	3.6	3.8	.4*
E1	1.9	1.7	1.8	2.2	1.7	.5
E2	2.0	1.8	1.7	2.4	1.7	.6
E3	1.8	2.2	1.9	2.1	1.9	.3*
-E4	3.7	3.9	4.3	2.5	3.0	.3*
E5	2.2	2.1	1.8	2.4	2.0	.5
-E6	4.0	4.1	4.1	3.1	3.4	.5

F1	2.3	2.7	2.1	2.6	2.2	.6*
F2	2.7	2.9	2.3	2.9	2.3	.6
-F3	3.2	2.9	2.8	3.3	3.3	.2*
-F4	2.9	2.8	3.1	2.9	3.0	.5
F5	2.8	3.3	2.6	3.0	2.7	.3*
-F6	2.5	2.8	2.9	2.9	2.6	.2*
-F7	3.2	3.4	3.6	3.3	4.0	.6
-F8	2.3	2.8	3.4	3.0	3.1	.5
-F9	3.0	3.5	3.9	3.1	3.9	.7
F10	2.5	2.4	2.1	2.7	2.0	.6*
F11	2.3	2.0	1.9	2.4	1.8	.6*

Notes:
1. These are raw response scores, before item reversals.
2. The items preceded by a minus sign were later reversed, as described in the text.
3. The figures underlined show stronger reactions then elsewhere; they represent scores of 2.0 and below, or 4.0 and above.
4. Correlations were calculated following item reversals; items not conforming to certain guidelines have been asterisked.